

Application No. 09/750,264
Reply to Final Office Action Mailed June 15, 2005

AMENDMENTS TO THE CLAIMS

The following claims replace all prior versions and listings of claims in the application:

Claims 1-6 (cancelled).

7. (Previously Presented) A method for reducing data loss in the event of packet loss in a modem relay connection over a packet network including a transmitting modem and a transmitting gateway, a receiving modem and a receiving gateway, the method comprising:

providing a packet format including a header portion, a sequence number and a data portion;

dividing said data portion into a plurality of segments;

designating one of said segments as a new data segment;

providing sequential blocks of modem data from said transmitting modem to said transmitting gateway;

retaining a predetermined number of sequential blocks of modem data at said transmitting gateway, by dropping the oldest block and retaining the most recent block;

providing the most recent block of data in said designated new data segment of said data portion of said packet;

providing the remaining retained blocks of data in the remainder of said

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segments;

wherein:

each time said transmitting gateway receives a new block of data from said transmitting modem, said oldest block is dropped from said retained set of data,

said new block of data is encoded in the next data packet as the new data block; and

said remaining retained blocks are encoded into said data packet as redundant data blocks; and

transmitting said packets from said transmitting gateway to said receiving gateway.

8. (Previously Presented) The method of claim 7, wherein said lost packet recovery at said receiving gateway includes:

receiving said transmitted packets;

reading said sequence numbers of consecutively received packets to determine packet loss, including;

comparing the sequence number of sequentially received packets, and determining the difference in the compared sequence numbers; and

providing the redundant data corresponding to data lost during said packet loss, to said receiving modem.

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9. (Previously Presented) The method of claim 8, wherein the number of said retained predetermined number of sequential blocks is re-negotiated when said number of detected missing packets exceeds said retained predetermined number of sequential blocks between the two gateways.

10. (Currently Amended) The method of claim 9, further including including:
detection of a value of the number of lost packets which exceeds the value of
said retained predetermined number of sequential blocks;
said receiving gateway reporting said detection; and
adjusting the redundancy to compensate for increases in packet loss across said
packet network.

11. (Currently Amended) A method for reducing data loss in the event of packet loss
in a modem relay connection over a packet network, comprising:
providing a packet format including a header portion, a sequence number and a
data portion;
dividing said data portion into a plurality of segments;
providing new data in at least one of said segments;
providing redundant data in at least one other of said segments, wherein said
redundant data corresponds to new are copies of prior data segments of at least four
packets having previous sequence numbers to the sequence number of the new data;

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reading said sequence numbers of consecutively received packets to determine packet loss;

retrieving redundant data from subsequent packets if packet loss is determined; and

reading non-redundant data segments within said received packets in consecutive order while discarding said redundant data if no packet loss is determined.

12. (Previously Presented) The method of claim 11, further comprising:

establishing a redundancy format for a given modem relay connection including:

negotiating a repetition count value;

providing said repetition count value to each end of said modem relay connection.

13. (Previously Presented) The method of claim 12, wherein said repetition count value is dependant upon the characteristics of said packet network.

14. (Previously Presented) The method of claim 11, wherein said establishing a redundancy format further includes:

negotiating a whole number value for the number of new bytes in each data packet.

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15. (Previously Presented) The method of claim 12 wherein said repetition count is re-negotiated when the packet loss number exceeds said repetition count.

16. (Previously Presented) The method of claim 15, further including:

detection of a value of the number of lost packets which exceeds the value of said repetition count;

said receiving gateway reporting said detection;

adjusting said repetition count to compensate for increases in packet loss across said packet network.